REMARKS

The above amendment with the following remarks is submitted to be fully responsive to the Office Action of March 28, 2005. Reconsideration of this application in light of the amendment and the allowance of this application are respectfully requested.

Claims 1-19 and 21-36 are pending in the present application prior to the above amendment. In response to the Office Action, claims 12, and 34-36 have been amended, claims 1-11 and 21-33 having been previously withdrawn from consideration. Therefore, claims 12-19 and 34-36 are believed to be in proper condition for allowance.

Referring now to the Office Action, claims 12-19 and 34-36 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserts that independent claims 12 and 34-36 reciting an inner peripheral surface of the nozzle support portion having a diameter at the proximal end adjacent to the tip is not disclosed in the originally filed application. In this regard, the Examiner asserts that the disclosure as originally filed does not disclose a "proximal end adjacent to said tip".

In reviewing the Examiner's rejection, it appears that the Examiner has misconstrued the specification and the drawings referred to therein. It is noted that the elected embodiment as shown in Figure 4 does not show a complete view of the retainer (214). Instead, as clearly discussed in the specification, Figure 4 merely shows a partial view of one end of the retainer (214) which corresponds to the retainer (14) shown in Figure 1, the recited proximal end (215) referring to the end of the retainer (214) having a nozzle support portion (230) thereon.

Regardless, in response to the Office Action, independent claims 12, and 34-36 have been amended to delete the recitation of "at said proximal end" so that the claims now recite that the inner peripheral surface of the nozzle support portion has a diameter adjacent to the tip that is smaller than the diameter of the outer peripheral surface of the integral nozzle shank adjacent to the tip.

In addition, the Examiner further rejected these claims under 35 U.S.C. 112, second paragraph, for double inclusion of the limitation "an engagement opening". Correspondingly, independent claims 12, and 34-36 have been amended to clarify that the second recitation of the engagement opening refers to an annular portion of the engagement opening that is defined between the integral nozzle shank and the nozzle support portion.

Finally, claims 12 and 34-36 were also rejected for the recitation of the term "adjacent", the Examiner asserting that it is uncertain what degree of proximity is encompassed by this limitation. The Applicants respectfully disagree and contend that the term adjacent is definite and should be interpreted per conventional meaning in which the term is typically used. In this regard, the dictionary identifies that a synonym to "adjacent" is "being in close proximity". It is respectfully noted that the limitation "close proximity" has been held to be not indefinite. (See Rosemount, Inc. v. Beckman Instruments, Inc., 727 F.2d 1540, 221 USPQ 1 (Fed. Cir. 1984). To the extent that the Examiner still disagrees and maintains that the limitation "adjacent" is indefinite, the Examiner is requested to contact the Applicants to find suitable alternative language that is acceptable to the Examiner.

Referring again to the Office Action, the Examiner rejected claims 12, 19, and 34-36 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,053,432 to Stevens. However, the Applicants again disagree and request reconsideration thereof in reference to the previously submitted amendment of January 14, 2005 in which this rejection was traversed, and the reference was distinguished from the claims. Briefly, the Stevens reference discloses a collar that prevents dilation of the nozzle body, and does not relate at all to improving the cooling characteristics of the fuel injector which is the problem addressed by the present invention. The Examiner was provided with a marked up copy of the sole figure of Stevens in which the significant gap present between the shank of the nozzle body 10 and the cap nut 19 was identified. Clearly, the cited Stevens reference fails to disclose an inner peripheral surface of the nozzle support portion having a diameter adjacent to the tip that is smaller than the diameter

of the outer peripheral surface of the integral nozzle shank adjacent to the tip such that an interference fit exists at a sealed interface between the integral nozzle shank, and the nozzle support portion, the sealed interface being positioned adjacent to the tip of the nozzle shank to thereby prevent combustion gas from passing through the sealed interface.

However, to further distinguish the present invention from Stevens, independent claims 12, 34, and 36 have been amended above to specifically recite that the retainer engages an outer barrel. In addition, claims 12 and 34-36 have been amended to recite that the retainer has a longitudinal axial dimension that is larger than the longitudinal axial dimension of the integral nozzle shank. Clearly, these limitations distinguish the present invention from Stevens which fails to disclose the claimed fuel injector. Therefore, the withdrawal of this rejection and the allowance of claims 12, 19, and 34-36 are respectfully requested, claim 19 being ultimately dependent on claim 12.

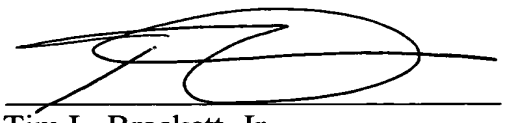
Referring again to the Office Action, claims 13, 14, 16, and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens discussed previously and above. However, this rejection is believed to be rendered moot in view of their ultimate dependency upon allowable independent claim 12.

Claims 12, 15, 18, and 34 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,000,638 to Martin in view of Stevens discussed above. However, as discussed in the response to the prior Office Action, Martin discloses an apparatus for strengthening the injector tip member by including a further member 186 to minimize the possibility of fracture. Thus, Martin addresses the problem of mechanical strength of the injector tip and is not related to improve cooling. Furthermore, even if Stevens and Martin are combined in the manner suggested by the Examiner, they still fail to result in a fuel injector as recited in independent claims 12 and 34 in that such combination still fails to result in an interference fit at a sealed interface that is positioned adjacent to the tip of the nozzle shank to thereby prevent combustion gas from passing through the sealed interface.

Moreover, such a combination as suggested by the Examiner still fails to result in a fuel injector having a retainer that engages an outer barrel, and where the retainer has a longitudinal axial dimension that is larger than the longitudinal axial dimension of the integral nozzle shank as now claimed. Therefore, the withdrawal of this rejection, and the allowance of claims 12, 15, 18, and 34 is respectfully requested.

In view of the foregoing, it is submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested. However, if the Examiner deems that any issue remains after considering this response, he is invited to call the undersigned to expedite the prosecution and work out any such issue by telephone.

Respectfully submitted,



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